
एकल सुपरफॉस्फेट — विशिष्टि
(तीसरा पुनरीक्षण)

Single Superphosphate —
Specification
(Third Revision)

ICS 65.080

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FOREWORD

This Indian Standard (Third Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Soil Quality and Fertilizers Sectional Committee had been approved by the Food and Agriculture Division Council.

This standard was first published in 1951 and revised in 1962 and 1979 as specification for Superphosphate. In the present revision, the title of the standard has been modified to Single Superphosphate. Also the classification of the product in two grades has been defined based on their form, namely grade I - Powdered and grade II – Granulated and a requirement of particle size has been added to the granulated grade. Marking clause has also been modified.

In the formulation of this standard, due consideration has been given to the provisions of the *Fertilizer (Control) Order*, 1985, the *Essential Commodities Act*, 1955 and the *Legal Metrology (Packaged Commodities) Rules*, 2011. However this standard is subject to the provisions imposed under this Order, wherever applicable.

For purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off of numerals' (*revised*). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

SINGLE SUPERPHOSPHATE — SPECIFICATION

(Third Revision)

1 SCOPE

1.1 This standard prescribes the requirements and the methods of sampling and tests for Single Superphosphate.

2 REFERENCES

The following standards contain provisions, which through reference in this text constitute provisions of this standard. At the time of publication the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	Title
460 (Part 1) : 1985	Test Sieves : Part 1 Wire Cloth Test Sieves
(Part 2) : 1985	Test Sieves : Part 2 Perforated Plate Test Sieves
6092	Method of sampling and test for fertilizers
(Part 1) : 1985	Sampling
(Part 3) : 1985	Determination of Phosphorus
(Part 5) : 1985	Determination of secondary elements and micronutrients
(Part 6) : 1985	Determination of Moisture and impurities
7406 (Part 1) : 1984	Specification for Jute Bags for packing Fertilizers Part I Laminated Bags manufactured from 407g/m ² : 85x39 Tarpaulin fabric
9755 : 2016	High Density Polyethylene (HDPE)/Polypropylene (PP) woven sacks for packing fertilizers — Specification

3 GRADES

3.1 There shall be two grades of the material, namely:

- a) Grade I - Powdered and
- b) Grade II - Granulated

4 REQUIREMENTS

4.1 The material shall be free from excessive lumps and shall not form a hard cake on storage.

4.2 The material shall also comply with the requirements given in Table 1 when tested in accordance with the methods given at col 5.

5 PACKING AND MARKING

5.1 Packing

The material shall be packed in Laminated Jute bags conforming to IS 7406 (Part 1) or high density polyethylene (HDPE)/Polypropylene (PP) woven sacks conforming to IS 9755, in quantities as stipulated in *Essential Commodities Act*, 1955 and the *Legal Metrology (Packaged Commodities) Rules*, 2011 and in accordance with *Fertilizer (Control) Order*, 1985.

5.2 MARKING

The containers shall be securely closed and marked with the following:

- a) Name of manufacturer/Pool handling agency/Importer (where a manufacturer is also pool handling agency, word 'P' and as the case may be, if an importer the word 'I' shall be written against the name of such manufacturer, if the bag contains imported fertilizer);
- b) Trade mark and/or Brand name, if any;
- c) Name of the fertilizer (in case of imported fertilizer, the word 'Imported' shall be superscribed);
- d) Percent nutrient as water soluble P₂O₅ and sulphur to be denoted by the letters: 'P(WS)' and 'S', respectively;
- e) Gross and net quantity in kilogram;
- f) Batch number;
- g) Maximum retail price.....inclusive of all taxes;
- h) Month and year of manufacture/import (in case of imported fertilizer); and
- j) Any other information required under the *Fertilizer (Control) Order*, 1985 and the *Legal Metrology (Packaged Commodities) Rules*, 2011.

5.2.1 BIS Certification Marking

The packages may also be marked with the Standard Mark.

The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standard Act*, 2016 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to

manufacturers or producers may be obtained from the Bureau of Indian Standards.

6 SAMPLING

6.1 Representative test samples of the material shall be drawn as prescribed in IS 6092 (Part 1).

6.2 Criteria for Conformity — For declaring the conformity of the lot to the requirements of this specification, the test results on the composite test sample shall satisfy all the requirements specified in 4.

Table 1 Requirements for Single Superphosphate
(Clause 3.2)

Sl No.	Characteristic	Requirement for		Methods of Test, Ref to Clause
		Grade I (Powdered)	Grade II (Granulated)	
(1)	(2)	(3)	(4)	(5)
i)	Moisture, percent by weight, <i>Max</i> ¹⁾	12.0	5.0	4 of IS 6092 (Part 6)
ii)	Free phosphoric acid (as P ₂ O ₅), percent by weight, <i>Max</i>	4.0	4.0	11 of IS 6092 (Part 3)
iii)	Water soluble phosphates (as P ₂ O ₅), percent by weight, <i>Min</i> ²⁾	14.5	14.5	7 of IS 6092 (Part 3)
iv)	Sulphur (as S), percent by weight, <i>Min</i> ²⁾	11.0	11.0	5.3 of IS 6092 (Part 5)
v)	Neutral ammonium citrate soluble phosphates (as P ₂ O ₅), percent by weight, <i>Min</i>	16.0	16.0	9 of IS 6092 (Part 3)
vi)	Particle size ³⁾	—	Not less than 90 percent of the material shall pass through 4 mm IS sieve and shall be retained on 1mm IS sieve. Not more than 5 percent shall pass through 1 mm IS sieve.	IS 460 (Part 1) IS 460 (Part 2)

¹⁾A tolerance of 0.3 units of moisture content shall be permissible.

²⁾A tolerance of 0.1 units of nutrient shall be permissible.

³⁾A tolerance of 3 units of particle size shall be permissible.

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This Indian Standard has been developed from Doc No.: FAD 07 (2785).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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Published by BIS, New Delhi